UNITED STATES PATENT AND TRADEMARK OFFICE

44

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ART UNIT	PAPER NUMBER
2145	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/033,305	CHAPWESKE, JUSTIN FALCONER
	Examiner	**Art Unit**	
	Tanim Hossain	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 February 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-137</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>78-85 and 103-119</u> is/are allowed.

6)☒ Claim(s) <u>1-77,86-102 and 120-137</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 86-93 and 120-127 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The description of a module receiving a request, from the source computer, to transfer partial data to a requesting computer before receiving the entire file, is not specifically disclosed in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 8-15, 17-23, 25-31, 33-41, 43-49, 51-57, 59-65, 67-74, 76, 77, 94-99, 101,

102, 128-133, 135, and 136 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nair

(U.S. 2004/0193900) in view of Carpentier (U.S. 2005/0010792) in further view of Boyd

(2002/0003541) in further view of Li (U.S. 2004/0205093).

As per claim 1, Nair teaches a network encoding method of using a computer for

transferring data, comprising: sending a request for data from a requesting computer to a

targeted computer system (paragraphs 0009-0010); accessing at the targeted computer system a

look-up list to identify other computers that have previously requested and received at least a

portion of the requested data (0009-0010; where the population of other nodes' lists have been

done by requesting and receiving data in a peer network); sending requests to the identified

computers, wherein upon receiving the requests, the identified computers have received the

requested data (0009-0010); encoding the data at the identified computers in response to the

requests (0045); sending the data from the identified computers to the requesting computer prior

to receiving the remaining portions of the data (0009-0010; where the receiving computer has not

yet received the remaining portions of the data); decoding the received encoded data (0045); and

saving the requested data in memory (0009-0010). Nair does not specifically teach the reception

of different partial portions of a data file from different computers. Carpentier teaches the partial

download of certain files, where other nodes simultaneously fill the missing parts of the file in a

peer-to-peer network (paragraph 0069). It would have been obvious to one of ordinary skill in

the art at the time of the invention to include the ability to have the ability to download files

piece by piece from a plurality of sources, as taught by Carpentier in the system of Nair. The

motivation for doing so lies in the fact that having the ability to have multiple sources from

which to partially download would allow a boost in transmission speed, because the file would then come from a plurality of sources, rather than just one, for example. Both inventions are from the same field of endeavor, namely the efficient transmission of data from peer to peer. Nair-Carpentier does not specifically teach that computers necessarily have different partial portions of data. Boyd teaches that different computers have different partial portions, which are then requested and downloaded by a requesting peer (paragraph 0047). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the specific use of different partial portions of data in a peer downloading system, as taught by Boyd in the system of Nair-Carpentier. The motivation for doing so lies in the fact that having a peer computer with different partial portions would simplify the nature of the packets being sent from peer to peer so that they may be reconstructed easily, rather than the process of deciphering which packets are outstanding for reconstruction, and attempting to obtain the packets for reconstruction from peers that do not have a clear delineation of which packets they do or do not have. This would lead to further efficiency of the invention. All inventions are from the same field of endeavor, namely the reception of data in a peer network. Nair-Carpentier-Boyd does not specifically teach the independent encoding of the partial portions of data. Li teaches the components from different peer nodes and encoding them independently (paragraphs 0037, 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the independent encoding as taught by Li in the system of Nair-Carpentier-Boyd. The motivation for doing so lies in the fact that independently encoding the portions of the file would allow for faster transmittal, leading to further efficiency of the system. All inventions are from the same field of endeavor, namely an efficient peer-driven data distribution scheme.

As per claim 2, Nair-Carpentier-Boyd-Li teaches the method of claim 1, wherein data transmission is accomplished from the one or more computers over a peer-to-peer network, wherein the other computers that previously requested and received at least a portion of the requested data are peers with the requesting computer (Nair: 0009-0010).

As per claim 3, Nair-Carpentier-Boyd-Li teaches the method of claim 1, wherein encoded packets are relayed (Nair: 0045).

As per claim 4, Nair-Carpentier-Boyd-Li teaches the method of claim 1, but does not specifically teach that the look-up list is populated with nodes based on data transfer rates. Official Notice is taken that the sorting of hits by transfer speed is a well known in the art of peer-to-peer networking. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to include such a display based on transfer rates, to allow for sorting by what would possibly yield the fastest download rate.

As per claim 5, Nair-Carpentier-Boyd-Li teaches the method of claim 1, wherein the look-up list is populated with nodes based on data types stored within the nodes (Nair: 0038).

As per claim 6, Nair-Carpentier-Boyd-Li further teaches that the lookup list is a mesh list that records which partial portions of the data each of the other computers have received (Li: 0092; Boyd: 0047); and that accessing the look-up list to identify the other computers includes selecting the identified other computers includes selecting the other computers based on the record of which partial portions of the data each of the other computers have received (Nair: 0009, 0010; Li: 0092; Boyd: 0047).

As per claim 8, Nair-Carpentier-Boyd-Li further teaches that the data that is to be encoded is segmented before encoding (Carpentier: 0069; Li: 0052).

As per claim 9, Nair-Carpentier-Boyd-Li further teaches that the received encoded

packets are decoded, and then re-encoded for further transmission upon request (Nair: 0009,

0010; Carpentier: 0069; Boyd: 0047; Li: 0052; wherein a P2P system, when retransmitting file

fragments, re-encodes data for transmission in the same manner in which it was received from

another peer).

As per claim 10 Nair-Carpentier-Boyd-Li teaches a method of using a computer for

transferring data, comprising: receiving a request for data from a computer (Nair: 0009, 0010);

accessing a look-up list to identify any peer computers that have previously downloaded at least

a portion of the request data (Nair: 0009, 0010); sending requests to the identified other peer

computers, wherein the identified peer computers have downloaded different partial portions of

the requested data upon receiving the requests (Carpentier: 0069; Boyd: 0047); encoding the

different partial portions of the requested data at the identified computers, wherein the data is

encoded using an acknowledgement independent equalized data packet encoding system (Li:

0052); and sending the encoded different partial portions of the data from at least two different

ones of the peer computers to the requesting computer prior to receiving all of the data at the

identified peer computers (Nair: 0009, 0010; Carpentier: 0069; Boyd: 0047; Li: 0052).

Claims 11-15 and 17 are rejected under Nair-Carpentier-Boyd-Li on the same bases as

claims 2-6, 8, and 9, as the instant claims disclose the same limitations as the earlier

corresponding claims.

Claims 18-23 and 25 are rejected under Nair-Carpentier-Boyd-Li on the same bases as

claims 2-6, 8, 9, and 10 as the instant claims disclose the same limitations as the earlier

corresponding claims.

As per claim 26, Nair-Carpentier-Boyd-Li teaches a method of using a computer for dynamically transferring data, comprising: sending a request for data to a targeted computer capable of servicing the request (Nair: 0009, 0010); receiving acknowledgement independent equalized data packets from at least two different sending computer that have previously downloaded different portions of the data from the targeted computers (Carpentier: 0069; where the multiple computers are used to download information; Boyd: 0047; where the multiple computers have different portions of data, given that different portions are downloaded from different computers, necessitating the computers having different portions from one another); decoding the received encoded data; and saving the decoded data in memory (Nair: 0009, 0010; Carpentier: 0069; Boyd: 0047; Li: 0052).

Claims 27-31, 33, and 34 are rejected under Nair-Carpentier-Boyd-Li on the same bases as claims 2-6, 8, 9, and 10 as the instant claims disclose similar limitations as the earlier corresponding claims.

As per claim 35, Nair-Carpentier-Boyd-Li teaches a system for transferring data, comprising: means to send a request for data from a requesting computer to a targeted computer (Nair: 0009, 0010); means to access a look-up list to identify other computers that have previously downloaded at least a portion of the requested data (Nair: 0009, 0010); means to send requests to the identified computers, wherein the identified computers have only received different partial portions of the requested data from the targeted computer system (Nair: 0009, 0010; in that the sending of requests are done on a conventional P2P basis; Boyd: 0047; where, when combined in a P2P system as in Nair, peer computers have different partial portions of files, as evidenced by the fact that in Boyd, the user receives different partial portions from

different entities); means to send the different partial portions of the data from the identified

computers to the requesting computer (Boyd: 0047; Carpentier: 0069; Li: 0052); means to

receive the different partial portions of the data from identified computers (Boyd: 0047;

Carpentier: 0069; Li: 0052); means to save the data in memory (Boyd: 0047; Carpentier: 0069;

Li: 0052). Nair-Carpentier-Boyd-Li does not specifically teach that the downloading of file

portions take place from a specific computer. It would have been obvious to one of ordinary

skill in the art at the time of the invention to include the limitation of having a centralized

computer from which the peers download the file portions, as having a centralized information

server is well known in the art. The motivation for doing so lies in the fact that having a specific

computer would enable transmittal of enterprise-specific, or classified information, which would

allow for the invention's use within an enterprise.

Claims 36-41 and 43 are rejected under Nair-Carpentier-Boyd-Li on the same bases as

claims 2-6, 8, 9, and 10 as the instant claims disclose similar limitations as the earlier

corresponding claims.

Claims 44-49 and 51 are rejected under Nair-Carpentier-Boyd-Li on the same bases as

claims 1-6, 8, 9, and 10 as the instant claims disclose similar limitations as the earlier

corresponding claims.

As per claim 52, Nair-Carpentier-Boyd-Li teaches a system for transferring data from a

set of peer computers to a requesting computer, comprising: means to receive at a source

computer a request to download data, wherein the source computer maintains a list of peer

computers that have previously downloaded at least a portion of the data (Nair: 0009, 0010;

where the building of lists constitutes a listing of what has been downloaded); means to encode

the data at the peer computers using an acknowledgement independent equalized data packet

encoding scheme at the direction of the source computer (Boyd: 0047; Carpentier: 0069; Li:

0052); means to send the encoded data from the peer computers to a requesting computer (Boyd:

0047; Carpentier: 0069; Li: 0052).

Claims 53-57 and 59 are rejected under Nair-Carpentier-Boyd-Li on the same bases as

claims 1-6, 8, 9, and 10 as the instant claims disclose similar limitations as the earlier

corresponding claims.

Claim 60 is rejected under Nair-Carpentier-Boyd-Li on the same basis as claim 26, as

claim 60 recites similar limitations to those of claim 26.

Claims 61-65, 67-74, 76, 77, 94-99, 101, 102, 128-133, 135, and 136 are rejected under

Nair-Carpentier-Boyd-Li on the same bases as claims 1-6, 8, 9, and 10 as the instant claims

disclose similar limitations as the earlier corresponding claims.

Claims 7, 16, 24, 32, 42, 50, 58, 66, 75, and 134 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Nair-Carpentier-Boyd-Li in view of Schuster (U.S. 6,771,674).

As per claim 7, Nair-Carpentier-Boyd-Li teaches the method of claim 1, but does not

specifically teach that the acknowledgement independent equalized data packet encoding scheme

is a FEC encoding. Schuster teaches the encoding of data using the FEC scheme, which is

acknowledgement independent and equalized (column 7, lines 20-34), and the decoding of the

received data (2; 20-52). It would have been obvious to one of ordinary skill in the art at the

time of the invention to include the ability to encode data prior to transmission, and then decode

this data after reception, as taught by Schuster in the system of Nair-Carpentier-Boyd-Li. The

motivation for doing so lies in the fact that having equalized encoded packets transmitted allows

for further flexibility in that packet loss would not result in the failure of the entire download –

the missing packet can easily be replaced. Both inventions are from the same field of endeavor,

namely the efficient transmission of data from peer to peer.

Claims 16, 24, 32, 42, 50, 58, 66, 75, and 134 are rejected on the same basis as claim 7.

As per claim 137, Nair-Carpentier-Boyd-Li-Schuster teaches a method comprising:

receiving at a source computer, requests for data from a first requesting computer and a second

requesting computer (Nair: 0009, 0010; Carpentier: 0069); in response to the requests,

delivering a first encoded portion from the source computer to the first requesting computer and

a second requesting computer, wherein the first encoded portion and the second encoded portions

are encoded using a FEC encoding (Boyd: 0047; Schuster: 7; 20-34); exchanging the first

encoded portion and the second encoded portion of the data between the first requesting

computer and the second requesting computer (Carpentier: 0069; Li: 0052); and decoding the

first encoded portion and the second encoded portion of the data to recreate the requested data at

the first requesting computer and the second requesting computer (Carpentier: 0069; Li: 0052;

Schuster: 7; 20-34).

Allowable Subject Matter

Claims 78-85 and 103-119 are allowed.

The following is the examiner's statement of the reasons for allowance. The amended

claims feature the reception of partial portions of a data file from a peer computer, followed by

the transmittal of those portions of file data to requesting peers before the original receiving peer

concludes downloading file data. In other words, partial file transfer by a peer is performed

before the file download is completed. In view of the inclusion of the narrowly claimed features,

specifically the downloading and uploading the partial files simultaneously, it is believed that the

claimed invention is novel. The examiner was unable to procure prior teachings of such features

as claimed, and could not render said features obvious to one of ordinary skill in the art, without

the use of impermissible hindsight constructions. It is therefore the examiner's belief that the

claimed invention, as set forth in the above claims, does indeed possess novelty.

Response to Arguments

Applicant's arguments filed on February 27, 2006 have fully been considered and have

respectfully been addressed by the new grounds of rejection and consideration.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tanim Hossain whose telephone number is 571/272-3881. The

examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jason Cardone can be reached on 571/272-3933. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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